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AUTHOR Kerckhoff, Alan C.
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ABSTRACT

Using data sets from several American and British studies, this study compares the process of status attainment in the U.S. and Great Britain. The overall social mobility from generation to generation is very similar in both countries, as are the relative effects of social origin and individual ability on educational attainment and social status. Although the American educational system is more open and competitive than the British system, the qualities that lead to high levels of attainment are very much the same in both countries. These findings are interpreted in relation to Lipset's analysis of the two countries' value systems and Turner's contrast between "sponsored" and "contest" mobility patterns. It is suggested that the two countries use quite different mechanisms to bring about largely the same result. (Author/JG)

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STRATIFICATION PROCESSES AND OUTCOMES IN ENGLAND AND THE U.S.*

Alan C. Kerckhoff
Duke University

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
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ABSTRACT

Duncan's model of status attainment in the U.S. is used as a point of comparison for the analysis of the process of educational attainment, using several American and English data sets. The overall amount of father-to-son mobility is very similar in the two countries and so are the relative contributions of social origin and ability to the son's attainment. Although the two educational systems are very different, the division of pupils into academic and non-academic segments reflects in almost identical fashion in both the effects of social origin and ability. These findings are interpreted in relation to Lipset's analysis of the two countries' value systems and Turner's contrast between "sponsored" and "contest" mobility patterns. It is suggested that, to a very considerable degree, the two countries use quite different mechanisms to bring about the same outcomes.

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STRATIFICATION PROCESSES AND OUTCOMES IN ENGLAND AND THE U.S.

There has been considerable interest in comparative studies of stratification and mobility by sociologists (Lipset and Bendix, 1959; Fox and Miller, 1966; Svalastoga, 1965; Hope, 1972). These studies have been mainly concerned with stratification in industrial societies, and they have led to discussions of the differences among these societies which are so similar in other respects. The basic index of stratification used in most of this work has been the prestige level of occupational positions, and there seems to be good reason to accept this as an equally appropriate index for most of the countries studied (Hodge, Treiman, and Rossi, 1966). There are differences in the proportional distributions in occupational groups and some have found differences in the overall amounts of intergenerational mobility (Fox and Miller, 1966; Svalastoga, 1965), but most findings suggest that the stable Western democracies are highly similar.

Yet, there also seem to be good reasons to anticipate significant differences in patterns of mobility between the U.S. and other countries, even other Western democracies. In particular, careful analyses of the value patterns and stratification processes in England and the U.S. have led some sociologists to view them as significantly dissimilar. For instance, Lipset (1963), in his discussion of the value orientations of England, the U.S., Canada and Australia, places the first two on opposite ends of practically all of his comparisons. He suggests that whereas the U.S. is highly equalitarian, England is elitist; where the U.S. emphasizes achievement, England stresses ascription; where the U.S. has universalistic standards of evaluation, England is particularistic.

Even in the context of an analysis which emphasizes such differences, however, Lipset leaves some doubt about the implications these differences have for mobility processes and outcomes. For instance, he says that

. . . Britain has come to accept the values of achievement in its economic and educational system (and to some extent in its political system), but retains the assumptions inherent in elitism: persons in high positions

are given generalized deference. In Britain, moreover, it is felt that those born to high places should retain it. This is the meaning of Tocqueville's remark that Britain has an "open aristocracy," which can be entered by achievement but which then conveys to new entrants many of the privileges of inherited rank. (Lipset, 1963, pp. 517-8)

Such a statement can be interpreted to mean that, although upward mobility may be attained through one's own efforts, once a family has reached high status its later generations are assured of maintaining high status. Such a pattern would result in relatively high levels of intergenerational continuity of social status.

At the same time, Lipset quotes at length, and with obvious approval, from an earlier work of Turner's (1960) in which Turner contrasts the mobility processes in England and the United States. He refers to the American system as one based on "contest mobility" whereas that in England is a system of "sponsored mobility."

Contest mobility is a system in which elite status is the prize in an open contest and is taken by the aspirants' own efforts. . . . Under sponsored mobility elite recruits are chosen by the established elite or their agents, and elite status is given on the basis of some criterion of supposed merit and cannot be taken by any amount of effort or strategy. (p. 856)

The governing objective of contest mobility is to give elite status to those who earn it, while the goal of sponsored mobility is to make the best use of the talents in society by sorting persons into their proper niches. (p. 857)

Lipset sees such mobility processes as manifestations of the different value systems of the two countries. It is not clear, however, that the English "elitist" system necessarily calls for high levels of intergenerational continuity, that it necessarily means that "those born to high rank should retain it." In fact, Turner's discussion suggests that something quite different may occur. He says that:

The most obvious application of the distinction between sponsored and contest mobility norms affords a partial explanation for the different policies of student selection in the English and American secondary schools. . . . The English system has . . . retained the attempt to sort out early in the educational program the promising from the unpromising so that the former may be segregated and given a special form of training to fit them for higher standing in their adult years. (p. 861)

He makes it clear that the English system is designed so as to make the selection for sponsorship on the basis of ability rather than social standing. In fact, he notes that

. . . recent research reveals surprisingly little bias against children from manual laboring-class families in the selection for grammar school, when related to measured intelligence. (p. 861)

Not only does this view of the English system provide a weaker basis than Lipset suggests for intergenerational continuity, Turner even speculates that there may be less continuity in England than in the United States.

It is altogether possible that adequate study would show a closer correlation of school success with measured intelligence and a lesser correlation between school success and family background in England than in the United States. While selection of superior students for mobility opportunity is probably more efficient under such a system, the obstacles for persons not so selected of "making the grade" on the basis of their own initiative or enterprise are probably correspondingly greater (pp. 861-2)

Such a prediction is reasonable if we remember that the English selection process occurs rather early in the child's life (at the age of eleven or twelve) and if we accept the view that selection is based largely on measures of ability (the so-called 11+ examination in particular).¹ Although the latter view is sometimes questioned, social origin being claimed as an important factor in selection, it is certainly true that the original purpose of the selection process was to maximize the

opportunities for higher education (and hence higher social status) of talented children, irrespective of their social origins. The Turner prediction does run counter to the popular view of class stability in England, however, and seems to run counter to Lipset's statement about the retention of high status once it is attained.

At the same time, both of these predictions, Turner's and Lipset's, are contrary to the previously reported finding that the amount of social mobility is basically the same in the two countries. There seem to be at least two possible reasons for this. First, it is possible that because the earlier studies have used crude measures of social status, sometimes only differentiating manual and non-manual occupations, they have not produced findings of sufficient precision to exhibit the kinds of differences these theorists suggest will be found. A second possibility is that the outcomes in the two systems may reflect differential contributions of social origin and ability, and that any analysis of mobility which considers only one of these will obscure part of the basis of discrimination between the two countries. The countervailing effects of social origin and ability are suggested in the quotation from Turner, above, and it may well be that the elitist-ascriptive tendencies Lipset emphasizes are counterbalanced by sponsorship based on ability.

This paper attempts to move us somewhat closer to an understanding of these issues through an analysis which focusses on patterns of educational attainment and which uses a multivariate model to analyze intergenerational mobility, a model which includes a measure of ability. The analysis to be presented confirms the previous finding of similar gross amounts of mobility in England and the U.S., and it attempts to explicate that finding.² Although the data used here are similar to those used in previous comparative mobility analysis, in that they are taken from extant studies made for other purposes, the data sets are much more detailed than those used previously. Thus, although methodological problems remain, the outcome provides a

firmer basis for a comparison of the Lipset and Turner kinds of discussion on the one hand and gross mobility measures on the other.

Method

In their landmark analysis of the American occupational structure, Blau and Duncan (1967) provided us with "a basic model of the process of stratification" in which a man's father's occupation and education were used as sources of explanation of the man's own educational attainment, and all three of those variables were used as an explanation of the man's occupational attainment. Duncan (1968) later added to this model by introducing a measure of ability as another source of explanation of educational attainment. Also, both of these analyses indicated the importance of family size as an additional index of the social status of the family of orientation. The resulting model thus used father's occupation and education, family size, and son's intelligence as predictors of son's educational attainment, and all of these as predictors of son's occupational attainment. The present analysis is primarily concerned with the explanation of the son's educational attainment, although a later section of the paper will discuss the link between educational and occupational attainment.

Duncan's (1968) analysis of 1964 data from American white males 25 to 34 years old constitutes the point of departure for the present paper. Highly comparable data are also available for a national sample of British males who were 21 years old in 1967. These come from the ambitious longitudinal study of babies born in the first week of March 1946 conducted by J.W.B. Douglas.³ Several reports of that study have appeared, the one most directly relevant to the present analysis being Douglas, Ross, and Simpson (1968).

Although the Duncan and Douglas data sets constitute the most important sources for this analysis, three others are also used. For the American case, the Wisconsin

sample of Sewell and his associates⁴ and my own Fort Wayne, Indiana sample (Kerckhoff, 1974a) will provide additional points of comparison. For the English case, one additional source is used. This is the National Service Survey conducted in 1956-1958 in conjunction with the work of the Crowther Committee (Ministry of Education, 1960).⁵ None of these other three data sets provides all of the variables needed in this analysis, nor are the samples involved as clearly appropriate to our present purposes as those used by Duncan and Douglas. However, they do provide other points of comparison, and their striking similarity in outcome to the more adequate data sets increases the weight of the evidence produced using the Duncan and Douglas data.

In any such analysis, the comparability of samples and measures used can be questioned. In this case, the primary samples used are both national in scope, Duncan's being a proportional sample of white men aged 25 to 34 in 1964, and Douglas' being a delimited temporal sample -- those survivors still traceable in Britain in 1967, twenty-one years after their birth in the first week in March 1946. All of the samples are described in the Appendix. Any discussion of the comparability of the measures is necessarily more complex, and that discussion is reserved for the Appendix. Suffice it to say at this point that none of the differences in measurement involved appear to be sufficient to provide a basis for seriously questioning the major findings reported. However, one issue related to the measurement question needs to be considered here. The one variable which is clearly non-comparable in the two countries, however it is measured, is the dependent variable, educational attainment. The English have very different levels of educational attainment than Americans, measured in terms of years of schooling, but, more important, educational attainment in England is not normally indexed by years of schooling. In most English studies, educational attainment is indexed either by the age the individual left school (roughly comparable to years of schooling) or, preferably, by some combination of leaving age and the "qualifications" attained.

"Qualifications" refers to various forms of certification usually dependent on passing some kind of examination. Because of these different criteria of educational attainment in the two countries, it is necessary to measure attainment in each case as it is usually indexed in that country. In the U.S., therefore, educational attainment is indexed by either actual years of schooling or by such cruder indexes as: less than high school, high school, some college, college, graduate or professional school. In the Douglas data set, three indices are used: school leaving age, qualifications gained while in school, and overall educational attainment. Overall educational attainment differentiates individuals according to qualifications gained (whether in school or after leaving school), but, for those with no qualifications, further differentiation is made according to leaving age. The specific measures used are described in the Appendix.

Findings

Perhaps the first issue to consider is whether these data agree with those of earlier mobility studies so far as the level of intergenerational mobility found. Not all of the earlier studies present their findings in a form that makes direct comparisons possible. However, Svalastoga (1965) reports correlations between father's and son's occupations for nine European industrialized countries. These correlations vary from .324 for Yugoslavia to .475 for Hungary with five of the nine (Denmark, England, Germany, Holland, and France) falling between .380 and .430. Svalastoga concludes (p.176) that "it would not be very far off the mark in any industrialized European country to predict father-son mobility equal to $r = .4$."

Within the limits of the data sets used here, correlations between father's occupation and education on the one hand and son's occupation and education on the other are presented in Table 1.⁶ The two basic data sets (Duncan and Douglas) are

Table 1 about here

remarkably similar. Even the "back up" data sets agree very closely with these findings. The most deviant outcomes are found with Sewell's data and with Douglas' measure of overall educational attainment. If we ignore those outcomes for a moment, the maximum difference between any two comparable coefficients is .051 (between Duncan and Kerckhoff in the Ed-Ed column). In short, there are at least as large differences among measures taken in the same country as there are between countries, and the Duncan and Douglas measures are almost identical for two of Douglas' educational attainment indexes. Thus, these findings confirm the previous impression that the amount of mobility in the two countries is very similar. They also agree with the general conclusion of Svalastoga that the status levels of fathers and sons in industrial societies correlate about .4.

The more refined analysis of educational attainment, using Duncan's model of the process of stratification, can also be conducted with these data sets. The matrices of correlations of the available measures in the five data sets are presented in Table 2. If we use the Duncan coefficients as the point of reference,

Table 2 about here

a number of the comparable coefficients in the other data sets differ by more than .05, and such differences are less often in the American than the English data.

It is important to notice, however, that of the twenty coefficients which differ by .05 or more from the comparable ones in Duncan's data set, nine involve the measure of ability, in all cases Duncan's coefficient is larger. In fact, all six of the correlations between ability and educational attainment found in the other data sets (English and American) are smaller than Duncan's by at least that amount. Duncan's coefficients resulted from his use of a "correction" intended to compensate for the fact that his ability measure came from a military sample and thus, he reasonably assumed, represented an attenuation of the full range of ability in the total population. His correction functioned so as to increase all correlations involving the ability measure. Although his reasoning is quite defensible, it should be noted that all of the other data sets are also undoubtedly subject to the same

attenuation, with the possible exception of Douglas'. As a result, it is worth re-
porting that when his "uncorrected"/^{coefficients}are compared with those in the other data sets,
there are many fewer differences.⁷ Instead of twenty cases in which a difference of
.05 or more is found, there are only twelve cases. Nine of the twelve are from the
English data sets. Of these, seven involve the family size variable, and in all
cases the English coefficients are smaller than Duncan's. Using Duncan's uncor-
rected coefficients, therefore, the results are remarkably similar for England and
the United States, with the exception of those involving family size. This is
especially true if either school leaving age or qualifications obtained in school is
used as the criterion of educational attainment in England. Certainly the differ-
ences anticipated by Turner are not found here.

Standardized regression coefficients (or path coefficients) for the regression
of educational attainment on the independent variables are reported in Table 3.⁸

Table 3 about here

Because family size is not available for the analysis of the Sewell or Kerckhoff
data, and because the correlations involving family size were consistently lower in
the English studies than in Duncan's analysis, the regressions were computed both
with and without family size as an independent variable. The first two panels of
Table 3 report these findings. In the last panel are the coefficients for Duncan's
data before he corrected for the attenuated distribution of ability.

Turning first to the top panel of Table 3, and using Duncan's analysis as the
point of comparison, we note that the equations are remarkably similar with one major
exception: The coefficient for ability is considerably larger in Duncan's than in
either the Douglas or Crowther data set. As a result of this, the R^2 in Duncan's
analysis is considerably larger than either of the others. It is interesting that,
although family size is not correlated as strongly with the other variables in
Douglas' as in Duncan's data, its unique effect on educational attainment is almost
the same in both countries. This is evidently a function of the fact that family

size is also less strongly related to the other independent variables (father's occupation and education and son's ability) in England.

With family size omitted from the equations, the differences in both the individual coefficients and in R^2 between the Douglas and Duncan analyses are altered in a number of ways. More importantly, however, it is only with family size omitted that direct comparisons involving the Sewell and Kerckhoff data sets can be made, and such comparisons are illuminating. To begin with, the R^2 in the Douglas and Crowther analyses, using either leaving age or qualifications obtained in school as the dependent variable, is as high or higher than in either the Sewell or Kerckhoff analyses. In fact, all four of these data sets produce R^2 values considerably below that resulting from Duncan's data set. The major differences in the individual path coefficients in the second panel of Table 3 are found in the ability column, the primary difference again being the fact that Duncan's is much higher than all others.⁹

In both panels, therefore, the major English-American difference is between the effect of ability in Duncan's analysis and in the Douglas and Crowther analyses. When we remember that Duncan corrected his correlations involving ability on a logic that seems equally appropriate to the other data sets, but that no correction was used with them, it suggests that his correction might be responsible for the differences observed. The last panel in Table 3 presents the Duncan regression analysis using the uncorrected correlations. The coefficients reported there are much closer to those produced by all of the other data sets (English and American) than those using the corrected correlations. Differences among the outcomes remain (e.g., Duncan's R^2 is still the largest of any), but they are quite small, and the differences among analyses from the same country are as great as those between countries. In short, the outcomes are so similar that there is no support for a claim that factors influencing educational attainment are different in the two countries.

These statements apply most clearly, however, when either school leaving age or qualifications obtained in school is used as the English measure of educational attainment. When overall educational attainment (including what we would call "adult education" and the English call "further education") is used as the dependent variable, the outcome is different. The R^2 is the lowest of any of the analyses (though only barely lower than Sewell's). This seems to be due almost entirely to a reduced effect of social origin, however, the effect of ability being roughly comparable to that found in the other English analyses. It may well be, as I have argued elsewhere (Kerckhoff, 1974b), that the availability of "further education" in England provides something closer to a "contest" than Turner recognized. In any event, such a measure may be inappropriate in the kind of comparison being made here since it involves a concept of "education" that is broader than that usually used in mobility studies, and one which is not easily applied in the U.S., given the way most studies here measure educational attainment.¹⁰ Again, we can only acknowledge the difficult problem faced in comparative studies when the systems being compared cannot be analyzed using exactly the same measures. It is clear, however, that, if Duncan's analysis is taken as the major point of comparison, either of the other two English measures of educational attainment produces more similar results than does overall educational attainment.

The fact that there is greater similarity between the American and English data when using attainment measures most closely associated with the English formal school system is puzzling. If the school system is one of the major bases of sponsored mobility in England, if children are separated into academic and non-academic groupings early in their lives and given different curricula, how does it happen that the process of educational attainment in England parallels that in the U.S. in which a wholly different sorting system is used? It can be shown (Kerckhoff, 1974b) that the assignment to one or the other type of school in England does affect educational attainment, using the same two measures we use here (leaving age and

qualifications). Somehow, though, the outcomes are the "same" in the two countries -- at least when outcomes are measured in each country's own terms.

One possible explanation of this puzzling result is that, however selection is made for attendance at the two kinds of English schools, it results in assigning those children to each of the two kinds of schools who would have followed those two kinds of educational paths anyway, if they had had an opportunity to compete for them. That is, it may be that the English system "sponsors" the same kinds of students who would win the "contest" in the U.S.

No wholly satisfactory way of checking this possibility is available within the data sets being analyzed, but one crude approximation may be used. Douglas' data set provides information about the type of school the boy attended, selective (academic) or non-selective. The nearest approximation to that kind of division in the U.S., within the continuing open academic contest, is the division in high school into college preparatory and other kinds of programs. Unfortunately, none of the American studies referred to above has used high school program as a variable in published analyses. However, my own Fort Wayne study, from which the analysis presented thus far comes, included a sample of white high school seniors, and we know what program they were in. We can use that sample for comparisons with the Douglas sample.

Table 4 reports the regression coefficients obtained when school type and high school program are regressed on the same four independent variables we have used in

Table 4 about here

the earlier analysis. The results are almost identical. Both the amount of variance explained and the relative contributions of ability and social origin are indistinguishable. Although the English boys were assigned to a school type at an early age (11 or 12) and the American boys chose a program at a later age (15 or 16), the division in the two countries reflects in almost identical fashion the contributions of both ability and social origin.¹¹

One final question needs to be considered. Though the parallels between the actual functioning of the English and American stratification systems noted thus far are very striking, the dependent variables used are measures of educational attainment. Most stratification studies use occupational attainment as the dependent variable. If the link between occupational and educational attainment is different in the two countries, the results presented above may not be a sufficient basis for concluding that the two systems function similarly. There is no adequate basis in the present data sets to examine this issue so far as the son's attainment is concerned, but there are measures of the educational and occupational attainments of the fathers.

Table 2 presents the correlations between father's education and occupation in the Douglas and the three American studies. Although the coefficient reported by Kerckhoff is higher, the other three are all very close to .50.¹² There is no basis in these data, therefore, to argue that the results would have been very different if occupational attainment measures for the sons had been available. This does not demonstrate, of course, that the full model would produce outcomes as similar as the present partial analysis has done. This can only be determined when more adequate data become available. So far, however, the two countries appear to be highly similar.

Summary and Discussion

Using Duncan's "basic model of the process of stratification" in the U.S. as the reference point, it has been shown that there is very little difference between England and the U.S. in the process of educational attainment. Not only is the degree of continuity of social level from father to son almost identical in the two countries, the relative importance of social origin and ability in affecting educational attainment is the same. Although the data base is somewhat less adequate, the analysis has also indicated that the process by which the English assign

youngsters to academic and non-academic forms of secondary education produces outcomes which are indistinguishable from those produced by the more open, competitive process by which American youngsters enter academic or non-academic programs. The analysis thus suggests that the two societies use different mechanisms to produce the same outcomes.

The major differences exhibited in these data are associated with the fact that Duncan's R^2 is larger than any other (English or American) and with his larger path coefficient for ability. Duncan did not use the original correlations involving ability but ones he "corrected," however, and we have found that the original correlations produce path coefficients and an R^2 much closer to those found with the English data sets. The other two American data sets are at least as close to the English as to Duncan's.

If we return to the previously noted discussions of Lipset and Turner with these findings before us, it is apparent that the expectations of neither of these theorists is confirmed. There is no indication of greater continuity in England, as suggested by Lipset, and there is no difference between the two countries in the correlations between either ability or family background and educational attainment, as predicted by Turner. It may be argued, of course, that the present analysis does not constitute the "adequate study" Turner called for, but the complete lack of differences here at least casts doubt on the adequacy of his predictions. Yet, Lipset's and Turner's descriptions are certainly not without substance. It seems that the factors they discuss tend to counterbalance each other, so that the overall outcomes in the two countries look the same. Although the English are more deferent than Americans to those with elite status, elite status can be gained by those of relatively low origin, through the sponsorship system. Although Americans provide a more open, competitive system of educational attainment, those qualities which lead to high levels of attainment are very much the same as those which lead to sponsorship in England. In both countries, the contributions of ability and social

origin to attainment are similar.

The Lipset and Turner formulations probably are more relevant to understanding the mechanisms by which attainment occurs and to specifying the qualities which are acknowledged as significant outcomes of attainment in the two countries. With regard to the latter, both authors suggest that Americans are more concerned with the attainments themselves (education, occupation, income) while the English give greater emphasis to those qualities of the person which can be gained only through sponsorship (style of life, speech patterns, social relations). Such an interpretation clearly goes beyond the scope of the present article, however, and deserves further careful consideration through other means.

In any event, the present analysis does not prove that the two stratification systems function in exactly the same way. After all, only between one-third and one-half of the variance in educational attainment is explained by the model used. Clearly, other factors than those considered here must be involved in the attainment process in both countries. One of those factors, especially noteworthy in the English system, is the means by which the school system sorts out youngsters into those it encourages and nurtures and those it "cools out," and we do not have a very adequate explanation of that sorting process. There are undoubtedly many other factors worthy of consideration in any attempt to explain more fully the distribution of outcomes in both countries, and these other factors may indeed reflect more clearly than those considered here the difference between sponsored and contest mobility. It may also be that methodological improvements will lead to more sensitive measurement and analysis techniques (Cf., Hope, 1972) which will make these effects more visible. The present analysis suggests that gross differences in the mobility patterns in the two countries are not likely to be found, but a good deal more refined analysis needs to be done before we can make definitive comparative statements.

APPENDIX

Three kinds of information are offered here. The samples from which the data were obtained are described, the measures used are defined, and the effects of using different measures are considered.

Samples

Duncan. Although the correlations Duncan used in his overall analysis (Duncan, 1968) come from a variety of sources, all of those used here come from white males aged 25 to 34 years old in two Current Population Surveys of the Bureau of the Census, one in March 1962 (Blau and Duncan, 1967) and one in October 1964 (Klassen, 1966). One of the coefficients used, however, was not actually measured but was inferred by Duncan from the others in the matrix, that between ability and family size.

Douglas. The original population sampled consisted of all babies born in Britain in the first week in March 1946. The study sample was made up of all those babies whose fathers were either farmers or in non-manual occupations and a one-fourth sample of those whose fathers were in manual occupations. This sample has been followed ever since that time. Those included in the present analysis are the boys whom the researchers had been able to trace for the twenty-one years from 1946 to 1967. About 77% of the original sample were still living in Britain and could be traced. The present analysis weighted these 1,872 cases so as to bring the sample back to the population distribution.

Sewell. This sample originally consisted of all the male high school seniors in Wisconsin public, private and parochial schools in 1957. A follow-up questionnaire was sent to one-third of the parents of these individuals in 1964-1965 which obtained attainment data about 88% of the males in the one-third sample. The analysis presented here is based on about 78% of those responding for whom all data for an analysis conducted by Hauser (1973) were present. Thus, that analysis and

this one are based on slightly less than 70% of the original one-third sample, or 3,427 cases. The sample is more restricted than the previous two because anyone who dropped out of high school before twelfth grade could not be included.

Kerckhoff. The population base for this study consisted of all the white male seniors in the public high schools in the Fort Wayne (Indiana) Community School System in 1963. They were contacted in 1969 by mail questionnaire. The sample used here consists of all of the whites for whom the necessary information was available, approximately 70% of the males in the 1963 senior class, a total of 396 cases (Kerckhoff, 1974a). Because private and parochial schools were not included, this sample is even more restricted than Sewell's.

Crowther. The sample consisted of every nth serviceman entering the Army and the R.A.F. for a one-year period. The periods differed somewhat for the two services, but the total sampling was carried out in 1956 through 1958. Because there was a universal service requirement during that period, the resulting sample corresponds closely with overall population statistics (Ministry of Education, 1960, pp. 110-112). The total sample was 7,991 young men, almost half of whom were 18 years old and almost all of whom were 18 to 21 years old.

Measurement

Although the variables used in all analyses are conceptually the same, the actual methods of measurement varied from one study to the next except for family size. (The Duncan sample reports having more sibs than do the English samples [3.5 versus 3.1].) Each of the other variables will be described.

Father's Occupation. In all three American studies, Duncan occupational SES scores were used (Duncan, 1961). Duncan asked for the respondent's father's occupation when the respondent was sixteen years old; Sewell's information came from the parents' tax returns at the time the subject was approximately twenty-five years old; Kerckhoff asked his respondents when they were about twenty-four years old what their father's occupation was when they were seniors in high school. The

Douglas measure was based on a classification of father's occupation when the boy was eleven years old. Although a somewhat more detailed classification was used by him, the one used here is made up of five categories: Professionals and employers of 10 or more employees; self-employed or salaried employees; non-manual wage-earners; foremen or skilled manual workers; semiskilled and unskilled workers, including agricultural workers. The Crowther analysis used a five-category classification: Professional and managerial; clerical and other non-manual; skilled manual; semi-skilled; unskilled. The American samples had average scores between 30 and 35, a level roughly equivalent to skilled craftsmen. The English samples produced average levels also at the skilled manual level.

Father's Education. Duncan used the number of years of formal schooling completed as reported by the son. Sewell used the son's report classified according to a seven-category system: Elementary school; some high school; completed high school; attended trade or business school; some college; college graduate; has had graduate or professional education. (Hauser assigned equivalent numbers of years to these, but the result is very similar.) Kerckhoff used the son's report also with categories the same as Sewell's except that eighth grade or less, ninth grade, tenth grade, and eleventh grade completions were coded separately. Douglas' data were recoded for this analysis into six categories: Primary school only; educated beyond primary but no qualifications; secondary school only; educated beyond secondary school but gained no qualifications; gained technical or commercial qualifications; gained professional qualifications or a higher degree. The Crowther data set used here included no measure of father's education. The American samples average between 9 and 11 years of schooling, Duncan's being lower than the other two. Douglas' sample's average father had gone beyond primary school but had no qualifications.

Ability. Duncan used a data set in which survey data had been matched with military records so that AFQT scores were available for all those men who were

veterans (what he calls "later intelligence" in his analysis). Because not all men had been veterans, and because those who had not been veterans tended to be low in ability, he "corrected" for this restriction on the population variance. He also justified this correction because the ability scores used were actually rather broad "mental group" interval scores instead of the more refined scores that could have been obtained. Sewell used centile ranks on the Henmon-Nelson Test of Mental Ability which had been administered when his subjects were in the eleventh grade. Kerckhoff used a six-category classification provided by the school system and based on the Lorge-Thorndike Intelligence Test taken when the boy was in the tenth grade. The ability measure in Douglas' data used here is a five-category classification of the scores obtained by the boys on the Alice Heim AH4 group intelligence test taken when they were fifteen years old. The Crowther measure is a five-category classification of the subject's performance on a set of five military classification tests (a rough equivalent of the American AFQT).

All of these samples tend to underrepresent the lower levels of ability, but the Sewell and Kerckhoff samples do this more so than the others because they are restricted to males who reach the twelfth grade. The Duncan and Crowther samples are restricted to the extent those with very low ability levels are rejected by the military service. (Duncan's correction for this in his computations is significant in the discussion above.) Probably the Douglas sample is least affected by such underrepresentation, but it seems likely that low ability and low status cases are the most difficult ones to follow over time and that attrition in his sample has been greater at those levels.

Educational Attainment. Duncan's measure is the number of years of formal schooling completed. The same measure was used with the analysis of the Sewell data used here. Kerckhoff used seven categories: less than high school; high school; business or technical school; community or junior college; some college; college graduate; graduate or professional school. The Douglas data set included

three attainment measures. School leaving age was coded in five categories ranging from 15 and 1/4 or before to after 18 and 1/4. Qualifications gained in school is a five-part classification: no qualifications; some "O" level pass(es); good "O" level pass(es); one "A" level pass; two or more "A" level passes. Overall educational attainment is a complex five-category system: left school at or before 16, did less than two years further education, and obtained no qualifications; left school after 16 or did two or more years further education, but obtained no qualifications; gained "O" level pass(es), Royal Society of the Arts or equivalent qualifications; gained "A" level pass(es) or equivalent level qualifications; entered full-time higher education or gained advanced qualifications. The Crowther measure used here is school leaving age classified into four categories ranging from 15 to 18 and over. The American samples average 12 or 13 years of schooling, Duncan's being lower than the other two. The majority in the English samples left school at 15, and just over half (52%) had no qualifications when they left. By age 21, just over half (52%) had some qualifications.

Equivalence of Measures

In most cases where non-identical measures are used in the analyses reported here, one or more of three conditions holds: either the measures can be assumed to be at least roughly similar because they were evolved from the same measurement tradition and were carefully designed to measure the same thing (as with the ability measures), or differing measures are used within the same country as well as (or instead of) in the compared countries (as with father's education), or the measures must be different because the two systems are different (as with educational attainment). The one crucial place where none of these conditions clearly holds is with the measures of father's occupation. All three of the American data sets use Duncan scores, and both of the English data sets use crude five-part category systems. It is important to provide some assurance that such a difference does not have an effect which could cast the whole comparative analysis presented here in doubt.

Two kinds of analysis were conducted to determine the possible effect of using such different measures. First, Blau and Duncan's (1967, p. 497) cross-tabulation of father's occupation and son's first job for their total sample was used to construct an intergenerational mobility table using crude categories roughly comparable to those used in the English data sets. The five categories used were: professionals, managers, and proprietors; sales and clerical; craftsmen and foremen; service workers and operatives; laborers and farm workers. A correlation coefficient was computed using that five-by-five table, and it was compared with the coefficient Blau and Duncan report for the same cases using the refined Duncan scores. They report a correlation of .417; the table produces a correlation of .444. As they note: "The status scores offer a useful refinement of the coarser classification but not a radically different pattern of grading." (p. 121)

However, the primary basis of the analysis in the present article is regression using multiple explanatory variables. Showing that one correlation is negligibly affected by a change of measurement does not suffice to demonstrate that that change would have little effect in the overall regression analysis. A second step was taken to gain some assurance on that point. For an earlier analysis of some of the Fort Wayne data a limited sub-set of the subjects' fathers' occupation reports had been recoded using an eight-part category system as well as the Duncan scores. These were data from 152 fathers of ninth and twelfth grade white boys. The categories used were: professional, managerial, clerical, sales, craftsmen, operatives, service workers, and laborers. The great majority of the cases were in the first six categories.

Three forms of the analysis were conducted, one using Duncan scores, one with the full set of categories and one with the categories collapsed into four contiguous pairs. (Since there were so few cases in the lowest two categories, however, the last two measures amount to a six-part and a three-part system.) Since the boys were still in school, educational attainment could not be used as the

dependent variable, so educational expectations were used instead. Expectations were regressed on father's occupation, father's education, family size, and ability. The results, using the three measures of father's occupation, are reported in Table A. There are very minor changes in the outcome, using the different measures. The

Table A about here

R^2 increases slightly and the FaOcc coefficient increases some as the FaOcc measure becomes cruder. The latter increase is compensated for by a slight decrease in the FaEd coefficient, however, so that the overall balance between the effects of social origin and ability is unaffected.

These two outcomes, using Duncan's and the Fort Wayne data sets, strongly suggest that the use of different occupational classification methods in the American and English data is not likely to have affected the outcome seriously. Since all of the other measures used are either identical (family size), highly similar (ability), or necessarily different (father's education and educational attainment), the variation in measures does not appear to be a serious problem.

FOOTNOTES

1. Although the English school system has been undergoing some significant alterations during the past decade, and the present appropriateness of this description may be debated, the analysis in this article uses data from the 1960s when it was clearly appropriate.
2. An even more refined analysis of a similar kind should be possible when the data are available which A. H. Halsey and his associates at Oxford have collected in their Nuffield Social Mobility Project. It is not expected, however, that they will be able to reproduce all the analysis provided here unless they use some form of synthetic cohort analysis.
3. The data used here were kindly provided by Dr. Douglas, and I wish to acknowledge his generosity and my indebtedness. The original sample was stratified by the occupation of the boy's father, and the data used here are weighted according to the original sampling ratios.
4. The data used here come from Hauser (1973).
5. Technically, the Crowther data come from a sample of young English and Welsh men. Similarly, Douglas' sample includes Welsh and Scottish cases as well as English. I have used the term "English" throughout for simplicity and because over ninety per cent of the Crowther sample and about eighty-five per cent of the Douglas sample are English.
6. No measure of son's occupation was available from Douglas. Though a father-son mobility table was available from the Crowther Report, associations between son's occupation and the other model variables were not available.
7. Duncan (1968) reports only two of the original correlations involving ability, but he discusses the general pattern sufficiently to permit the assumption that the other two were approximately .06 lower than reported in his article. The coefficients used were thus .23, .22, -.20 and .50 for the correlations between

ability and father's occupation, father's education, family size, and educational attainment, respectively.

8. Given the fact that different metrics are used in the several studies, no two coefficients are based on exactly the same pair of measures, and thus the unstandardized coefficients are not particularly meaningful in such comparisons. Although Blalock's concern about comparisons of standardized coefficients across samples (see Blalock, 1967) is well-founded, there is no alternative in the present analysis. So long as different indices are the only meaningful ones in cross-national comparisons (such as with educational attainment in the present analysis), there appears to be no general way to solve this problem in comparative research.
9. Although there are variations in the father's occupation and father's education effects, the combined effects of these two measures of social origin do not vary greatly, and differences between data sets from the same country are as great as between countries.
10. The importance of taking further education into account in England suggests that perhaps, even in the U.S., educational experiences outside the usual formal school channels (night school, occasional courses at community colleges, continuing education, etc.) may be significant mobility channels.
11. It may well be that the American boys did not "choose a program" in as formal a manner as this suggests. To begin with, they did not have a free choice, but had to qualify. Also, the division into college preparatory and other programs used here is based on the boy's own report. That report may reflect his educational ambitions as much as any formal programmatic involvement. However, there was less than a perfect correspondence between answers to this question and to a question which directly asked about educational goals. More boys reported being in the college preparatory program than said they expected to go to college.

12. It may be, as suggested elsewhere (Kerckhoff, 1974a), that the differences in the U.S. samples are due to the time at which the measures were made and/or the age of the subjects, but for the present discussion it seems more reasonable simply to consider the Kerckhoff coefficient to be "too high." Other American studies (e.g., Hauser, 1971) obtain coefficients much more similar to Duncan's and Sewell's.

REFERENCES

Blalock, H. M., Jr.

- 1967 "Path coefficients versus regression coefficients." *The American Journal of Sociology* 72 (May): 675-6.

Blau, Peter M., and Otis Dudley Duncan

- 1967 *The American Occupational Structure*. New York: Wiley

Douglas, J. W. B., J. M. Ross, and H. R. Simpson

- 1968 *All Our Future: A Longitudinal Study of Secondary Education*. London: Peter Davies.

Duncan, Otis Dudley

- 1961 "A socioeconomic index for all occupations." Pp. 139-161 in Albert J. Reiss et al., *Occupations and Social Status*. New York: Free Press of Glencoe.

- 1968 "Ability and achievement." *Eugenics Quarterly* 15 (March): 1-11.

Duncan-Jones, P.

- 1972 "Social mobility, canonical scoring and occupational classification." Pp. 191-210 in Keith Hope (ed.), *The Analysis of Social Mobility: Methods and Approaches*. Oxford: Clarendon Press.

Fox, T. G., and S. M. Miller

- 1966 "Intra-country variations: occupational stratification and mobility." Pp. 574-581 in Reinhard Bendix and S. M. Lipset (eds.), *Class, Status and Power*. New York: The Free Press.

Hauser, Robert M.

- 1971 *Socioeconomic Background and Educational Performance*. Washington, D.C.: American Sociological Association.
- 1973 "Disaggregating a social-psychological model of educational attainment." Pp. 255-284 in Arthur S. Goldberger and Otis Dudley Duncan (eds.), *Structural Equation Models in the Social Sciences*. New York: Seminar Press.

Hodge, Robert W., Donald J. Treiman, and Peter H. Rossi

- 1966 "A comparative study of occupational prestige." Pp. 309-321 in Reinhart Bendix and S. M. Lipset (eds.), *Class, Status and Power*. New York: The Free Press.

Hope, Keith

- 1972 *The Analysis of Social Mobility: Methods and Approaches*. Oxford: Clarendon Press.

Kerckhoff, Alan C.

- 1974a *Ambition and Attainment: A Study of Four Samples of American Boys*. Washington, D. C.: American Sociological Association.
- 1974b "An educational attainment model for Great Britain." Presented at the annual meeting of the American Sociological Association, Montreal, Canada.

Klassen, A. D., Jr.

- 1966 *Military Service in American Life Since World War II: An Overview*. Report No. 117, National Opinion Research Center, Chicago.

Lipset, S. M.

- 1963 "The value patterns of democracy: a case study in comparative analysis." *American Sociological Review* 28 (August): 515-531.

Lipset, S. M. and Reinhart Bendix

- 1959 *Social Mobility in Industrial Society*. Berkeley: University of California Press.

Ministry of Education

- 1960 15 to 18: *Report of the Central Advisory Council for Education - England*. London: Her Majesty's Stationery Office.

Svalastoga, Kaare

- 1965 "Social mobility: the Western European model." *Acta Sociologica* 9 (Fasc. 1-2): 175-182.

Turner, Ralph H.

- 1960 "Sponsored and contest mobility and the school system." *American Sociological Review* 25 (December): 855-867.

Table 1

Indices of Intergenerational Continuity,
England and the U.S.

	Occ-Occ	Ed-Occ	Occ-Ed	Ed-Ed
Duncan	.39	.34	.43	.41
Sewell	--	--	.325	.334
Kerckhoff	.408	.314	.405	.359
Douglas (a)	--	--	.432	.404
" (b)	--	--	.380	.380
" (c)	--	--	.320	.322
Crowther (a)	.355	--	.429	--

NOTE: In each column, the first reference is to the father's characteristics. Son's occupation is measured in the same way as father's occupation, but there are some differences between measures of father's and son's education (See Appendix). In the Douglas and Crowther rows, (a) refers to leaving age, (b) to qualifications obtained in school, and (c) to overall educational attainment.

Table 2

Intercorrelations of All Model Variables,
England and the U.S.

	FaEd	Family Size	Ability	*EdAtt(a)	*EdAtt(b)	*EdAtt(c)
Duncan#						
FaOcc	.49	-.27	.29	.43	--	--
FaEd		-.29	.28	.41	--	--
Family Size			-.26	-.35	--	--
Ability				.59		
Sewell						
FaOcc	.494	--	.212	.325	--	--
FaEd			.244	.344	--	--
Ability				.481		
Kerckhoff						
FaOcc	.620	--	.266	.405	--	--
FaEd			.303	.359	--	--
Ability				.506	--	--
Douglas						
FaOcc	.532	-.190	.265	.432	.393	.320
FaEd		-.148	.223	.404	.389	.322
Family Size			-.193	-.260	-.259	-.271
Ability				.467	.504	.473
*EdAtt(a)					.874	.692
*EdAtt(b)						.748
Crowther						
FaOcc	--	-.250	.336	.429	--	--
Family Size			-.273	-.243	--	--
Ability				.520	--	--

*See note to Table 1

#Duncan reports only two-digit correlations.

Table 3
Regression Analysis of Educational Attainment,
England and the U.S.

	Independent Variables				R^2
	FaOcc	FaEd	Family Size	Ability	
Duncan	.186	.151	-.137	.458	.460
Douglas (a)*	.213	.196	-.125	.343	.364
Douglas (b)*	.161	.197	-.123	.393	.370
Douglas (c)*	.106	.158	-.155	.380	.306
Crowther (a)*	.275	--	-.062	.411	.347

Duncan	.205	.175	--	.482	.444
Sewell	.162	.154	--	.409	.301
Kerckhoff	.243	.082	--	.416	.339
Douglas (a)*	.229	.202	--	.362	.349
Douglas (b)*	.176	.203	--	.412	.356
Douglas (c)*	.125	.165	--	.403	.284
Crowther (a)*	.286	--	--	.424	.343

Duncan (uncorrected)	.212	.174	-.166	.380	.411
Duncan "	.237	.206	--	.400	.386

*See note to Table 1

Table 4

Regression Analysis of School/Program Division,
England and the U.S.

	FaOcc	Independent Variables			R ²
		FaEd	Family Size	Ability	
Kerckhoff (College Prep)	.085	.183	-.079	.408	.309
Douglas (Selective School)	.130	.138	-.088	.396	.293

Table A

Regression Analysis of Educational Expectations
Using Three FaOcc Measures

FaOcc Measure	FaOcc	Independent Variables			R ²
		FaEd	Family Size	Ability	
Duncan Scores	.156	.274	-.030	.268	.312
Eight Categories	.178	.254	-.029	.294	.325
Four Categories	.199	.249	-.028	.288	.331